



## GEF SECRETARIAT REVIEW FOR FULL/MEDIUM-SIZED PROJECTS\* THE GEF/LDCF/SCCF/NPIF TRUST FUNDS

GEF ID:	5335		
Country/Region:	Chile		
Project Title:	Promoting The Development of Biogas Energy amongst Select Small- and Medium-Sized Agro-Industries		
GEF Agency:	UNIDO	GEF Agency Project ID:	
Type of Trust Fund:	GEF Trust Fund	GEF Focal Area (s):	Climate Change
GEF-5 Focal Area/ LDCF/SCCF Objective (s):	CCM-3;		
Anticipated Financing PPG:	\$0	Project Grant:	\$1,715,151
Co-financing:	\$16,444,500	Total Project Cost:	\$18,159,651
PIF Approval:	July 01, 2013	Council Approval/Expected:	
CEO Endorsement/Approval		Expected Project Start Date:	
Program Manager:	Ming Yang	Agency Contact Person:	Nina Setsche

Review Criteria	Questions	Secretariat Comment at PIF (PFD)/Work Program Inclusion <sup>1</sup>	Secretariat Comment At CEO Endorsement(FSP)/Approval (MSP)
Eligibility	1. Is the participating <b>country eligible</b> ?	ANW, March 26, 2013: Yes	FJ - July 3, 2014: Yes.
	2. Has the <b>operational focal point</b> endorsed the project?	ANW, March 26, 2013: Yes, by the letter signed in February 1st, 2013.	
Resource Availability	3. Is the proposed Grant (including the Agency fee) within the <b>resources available</b> from (mark all that apply):		
	• the STAR allocation?	ANW, March 26, 2013: Yes, the US\$ 1,932,840 grant requested is within the available resources remaining for CC allocation. Chile has a remainder of US\$2,011,840 for CC allocation.	MY 8/20/2014 Yes.
	• the focal area allocation?	N/A	FJ - July 3, 2014: Yes.

\*Some questions here are to be answered only at PIF or CEO endorsement. No need to provide response in gray cells.

<sup>1</sup> Work Program Inclusion (WPI) applies to FSPs only. Submission of FSP PIFs will simultaneously be considered for WPI.  
FSP/MSP review template: updated January 2013

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	<ul style="list-style-type: none"> <li>the LDCF under the principle of equitable access</li> </ul>	N/A	MY 8/20/2014 N/A
	<ul style="list-style-type: none"> <li>the SCCF (Adaptation or Technology Transfer)?</li> </ul>	N/A	MY 8/20/2014 N/A
	<ul style="list-style-type: none"> <li>the Nagoya Protocol Investment Fund</li> </ul>	N/A	MY 8/20/2014 N/A
	<ul style="list-style-type: none"> <li>focal area set-aside?</li> </ul>	N/A	MY 8/20/2014 N/A
Strategic Alignment	<p>4. Is the project aligned with the focal area/multifocal areas/ LDCF/SCCF/NPIF <b>results framework and strategic objectives</b>?</p> <p><i>For BD projects: Has the project explicitly articulated which Aichi Target(s) the project will help achieve and are SMART indicators identified, that will be used to track progress toward achieving the Aichi target(s).</i></p>	ANW, March 26, 2013: Yes, the project is aligned with the CCM-3 Strategic objective	FJ - July 3, 2014: Please see Q6.  MY 8/20/2014: Yes.
	<p>5. Is the project consistent with the recipient <b>country's national strategies and plans</b> or reports and assessments under relevant conventions, including NPFE, NAPA, NCSA, NBSAP or NAP?</p>	<p>ANW, March 26, 2013: Please clarify the role of renewable energy, especially biogas technology as captured in the Second National Communications of Chile.</p> <p>ANW, April 30, 2013: Biogas technology is one of the renewable energy technologies recognized for promotion under the Second National Communications of Chile. Comment cleared.</p>	FJ - July 3, 2014: Yes.
	<p>6. Is (are) the <b>baseline project(s)</b>, including problem(s) that the baseline project(s) seek/s to address, sufficiently described and based on sound data and assumptions?</p>	ANW, March 26, 2013: Please clarify the value added for the GEF as there seem to be existing funds in Chile (including funds hosted by CORFO as well as the CTF ) which can be used to fund implementation of biogas technology.	FJ - July 3, 2014: a) Chile already has pre-defined objectives and mechanisms regarding the share of non-conventional RE to be produced. In this context, Please clarify how the project is going to lead to

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Project Design		<p>ANW, April 30, 2013: None of the existing funds target biogas technologies explicitly at the moment nor specifically address the risks projects face in the earlier stages of their development. Complementarity between the GEF funds and existing sources will be sought during project implementation to leverage greater overall impact of the project. Comment cleared.</p>	<p>additional emission reductions. As presented it appears as if the project will only provide an alternative to achieving pre-defined emission reductions, without additional emission reductions.</p> <p>b) The approved NAMA "Self-Supply Renewable Energy in Chile (SSRE)", appears to overlap with the proposed project. Please detail how the proposed project will ensure that it will deliver emission reductions that are additional to this NAMA.</p> <p>c) There seem to be duplication with the NAMA activities for capacity building of project developers, national industries, energy professionals, financial experts and public officers. Outcome 2 does not seem to be a complement to the baseline but rather duplication. Please clarify.</p> <p>d) Output 3.2. Outreach activities are also covered by the SSRE NAMA, CER, CORFO and Ministry of Energy and FIA and INDAP. Please detail the added value of the proposed activities for this output.</p> <p>e) Please clarify whether the estimated rate of returns of biogas investments presented on page 12 of the CEO approval takes into account issues and variability associated with the costs associated with transferring the biogas from where it is produced to where it can be used as a source of energy. If not, please detail how these elements may affect the rate of return and hence the project activities and design. Please also clarify whether the estimations provided</p>

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			<p>are based on imported technology or local technology.</p> <p>f) Please clarify why the CEO Approval mentions pilot digesters developed by Chilean institutions in milk factories when the project focuses on biodigesters located in farms.</p> <p>MY 8/20/2014: Cleared.</p>
	<p>7. Are the components, outcomes and outputs in the <b>project framework</b> (Table B) clear, sound and appropriately detailed?</p>	<p>ANW, March 26, 2013: a) Please clarify the challenges and the current regulations governing power generation for self-supply in Chile b) Please clarify the main barriers preventing the adoption of biogas technology by SMEs c) Please clarify how the project intends to help develop and enforce technical quality standards for biogas technology.</p> <p>ANW, April 30, 2013: a) Clarification provided. Comment cleared. b) Clarifications provided. Comment cleared. c) Clarifications provided. Comment cleared.</p>	<p>FJ - July 3, 2014: Component 1: a) Output 1.2: Please detail how the collection of data on economic feasibility of biogas project will be made widely available and easily usable. You may want to consider supporting the design of a user-friendly calculator/estimator available for farmers/project developers online or through SMS. b) Please detail how the project will devise cost-effective strategies to ensure that capacity is developed and sustained in Chile to perform operation and maintenance, and financial engineering to minimize capital costs. c) Output 1.1 needs to support implementation, and enforcement of regulations, not only their design.</p> <p>Component 2: d) Outcome 2: Please revise the description of Outcome 2; the project is expected to put training and certification programs in place and to ensure they can be sustained beyond project completion. e) Output 2.2 is expected to test</p>

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			<p>and adjust the training and certification programs developed under output 2.1. Please make sure this is the case.</p> <p>f) Experience in other countries shows that small scale biodigesters are too far from economic viability and would need very high subsidy level to be developed. Please consider not developing a simplified training program to reach smallholder farms and shifting the means devoted to this activity to other parts of the project.</p> <p>Component 3:</p> <p>g) Please detail what the proposed permanent support facility would be, how it would function and how its means would be sustained beyond project completion.</p> <p>h) Please clarify what activity is planned under output 3.4 in addition to the other outputs and components of the project. The current description only mentions existing instruments (the NAMA facility) and outputs.</p> <p>MY 8/20/2014: Cleared.</p>
	<p>8. (a) Are global environmental/adaptation benefits identified? (b) Is the description of the incremental/additional reasoning sound and appropriate?</p>	<p>ANW, March 26, 2013: Yes</p>	<p>FJ - July 3, 2014:</p> <p>a) Outcome 1: the project activities targeting enabling conditions for project development, grid connection and sales of biogas and heat seem to duplicate what the NAMA project already plans to do. Please detail the added value of the proposed project and how this would lead to additional GHG emission</p>

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			<p>reductions.</p> <p>b) Output 1.1: given that the SEC is already preparing a policy project targeting integrity and operational safety of biogas installations, please clarify the added value of the project for this output.</p> <p>c) Output 3.1: Please detail the added value of the activities proposed compared to what the NAMA project already plans to do. It is understood that the SSRE NAMA already intends to provide technical and legal assistance to project developer. Output 3.1 thus appears redundant.</p> <p>d) Output 3.3: Since the NAMA already include a pre-investment financial mechanism with similar modalities as those proposed under Output 3.3, please clarify the added value of the proposed support to funding pre-investment costs. Please also clarify whether the CORFO tenders (to which some of the supported projects may apply) has a pre-defined window for the generation of electricity and heat in farms with 100-500 animals.</p> <p>e) Please detail the assumptions based on which the CEO Approval request estimates that the project will lead to \$4 million direct investment in biogas installations.</p> <p>f) Please detail the source of the ratio used to convert investments amounts in US\$ to kW capacity for biogas.</p> <p>g) Please detail the assumptions that led to estimate a potential of 20.6</p>

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			<p>MW among small and medium-sized dairy farms. This does not seem consistent with the focus on farms between 100 and 500 cows presented in Table 6.</p> <p>h) Please clarify why the calculation of direct impact considers 10 years life-time for the supported installations when the indirect impact only considers 5.5 years for the average operation time. This is not consistent. Please also detail the source used for estimating the average operation time of biogas plants.</p> <p>i) Please detail the assumptions enabling to apply a 60% GEF causality factor to the deployment of biogas in dairy farms. The description of the current situation show that the financial support facilities and instrument are already in place and that project will only support a limited number of biogas projects.</p> <p>j) The assumptions made on the project impact beyond the biogas market do not appear to be very strong. Please consider not taking into account this indirect impact.</p> <p>MY 8/20/2014: Cleared.</p>
	<p>9. Is there a clear description of: a) the <b>socio-economic benefits</b>, including gender dimensions, to be delivered by the project, and b) how will the delivery of such benefits support the achievement of incremental/ additional</p>		<p>FJ - July 3, 2014: Yes.</p>

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	benefits?		
	10. Is the role of public participation, including CSOs, and indigenous peoples where relevant, identified and explicit means for their engagement explained?	ANW, March 26, 2013: Yes	FJ - July 3, 2014: Yes.
	11. Does the project take into account potential major risks, including the consequences of climate change, and describes sufficient risk mitigation measures? (e.g., measures to enhance climate resilience)	ANW, March 26, 2013: Yes	<p>FJ - July 3, 2014: The development of biodigesters involves an increase of methane production. This can make sense for climate change mitigation as long as the methane is burned for energy production purposes. Please (i) identify the methane leakage risks in biogas installations at farm level; (ii) detail how potential leakage will be monitored during the project and after project completion; and (iii) how the project will ensure that methane leakage can be avoided during the project and after project completion.</p> <p>MY 8/20/2014: Cleared.</p>
	12. Is the <b>project consistent and properly coordinated</b> with other related initiatives in the country or in the region?	<p>ANW, March 26, 2013: Please clarify the complementarity between the GEF project with the CTF, and institutional arrangements to ensure coordination and linkage between the GEF project and CTF-funded initiatives.</p> <p>ANW, April 30, 2013: By CEO Approval, please provide concrete institutional arrangements to ensure that there are linkages between the proposed</p>	<p>FJ - July 3, 2014: To be reviewed once the other comments have been addressed.</p> <p>MY 8/20/2014: Yes (page 35).</p>

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		GEF project and the CTF-funded initiatives. Comment cleared.	
	<p>13. Comment on the project's <b>innovative aspects, sustainability, and potential for scaling up.</b></p> <ul style="list-style-type: none"> <li>Assess whether the project is innovative and if so, how, and if not, why not.</li> <li>Assess the project's strategy for sustainability, and the likelihood of achieving this based on GEF and Agency experience.</li> <li>Assess the potential for scaling up the project's intervention.</li> </ul>	<p>ANW, March 26, 2013: Please clarify the innovativeness of this project</p> <p>ANW, April 30, 2013: The approach is deemed to be innovative in the way that it targets SMEs, whose core business is of an agro-industrial nature rather than related to energy production. The project will also leverage substantial investment from agro-industrial enterprises to install biogas plants. Comment cleared.</p>	<p>FJ - July 3, 2014: Output 2.1: Once Q6 and Q8 have been addressed, please detail how the project will ensure that it not only delivers recommendations for the sustainability of the proposed training and certification program but also supports the setting up of the proposed elements to ensure their sustainability.</p> <p>MY 8/20/2014:  Cleared.</p>
	14. Is the project structure/design sufficiently close to what was presented at PIF, with clear justifications for changes?		FJ - July 3, 2014: The differences in the project structure have been explained.
	15. Has the cost-effectiveness of the project been sufficiently demonstrated, including the cost-effectiveness of the project design as compared to alternative approaches to achieve similar benefits?		<p>FJ - July 3, 2014: To be reviewed once the other comments have been addressed.</p> <p>MY 8/21/2014 The Agency did not undertake a detailed cost-effectiveness analysis for this project to compare with alternative approaches to achieve similar benefits. But biogas energy technology in most countries is the most effective among other renewable energy technologies.</p>
	16. Is the GEF funding and co-financing as indicated in Table B appropriate and adequate to	ANW, March 26, 2013: Yes	FJ - July 3, 2014: To be reviewed once the other comments have been addressed.

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Project Financing	achieve the expected outcomes and outputs?		MY 8/21/2014 Yes.
	17. <u>At PIF</u> : Is the indicated amount and composition of co-financing as indicated in Table C adequate? Is the amount that the Agency bringing to the project in line with its role? <u>At CEO endorsement</u> : Has co-financing been confirmed?	ANW, March 26, 2013: The co-financing provided by UNIDO is small with 1.15% of the total co-financing and 50% of this is in-kind. Is there any possibility for the UNIDO to increase its co-financing?  ANW, April 30, 2013: UNIDO is providing \$60,000 (in cash) and \$40,000 (in-kind) which will be used mainly for monitoring and evaluation purposes during project implementation. UNIDO will also provide USD 40,000 in cash in project preparation (PPG phase). Comment cleared.	FJ - July 3, 2014: Please clarify the role and involvement of Schwager Biogas and Fundo Playa Venado in the project.  MY 8/20/2014: Cleared.
	18. Is the funding level for <b>project management cost</b> appropriate?	ANW, March 26, 2013: Yes, the project management is 9.6% which is appropriate as the project cost is less than 2million.	FJ - July 3, 2014: The co-financing ratio of the project management cost is lower than what has been approved at PIF stage. Please increase the project management cost co-financing ratio to a level at least equal to the co-financing ratio of the approved PIF.  MY 8/20/2014: Cleared
	19. <u>At PIF</u> , is PPG requested? If the requested amount deviates from the norm, has the Agency provided adequate justification that the level requested is in line with project design needs? <u>At CEO endorsement/ approval</u> , if PPG is completed, did Agency report on the activities using the	ANW, March 26, 2013: Yes, a PPG of \$50,000 is requested.	FJ - July 3, 2014: The Agency reported on the activities using the PPG fund.

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	PPG fund?		
	20. If there is a <b>non-grant instrument</b> in the project, is there a reasonable calendar of reflows included?	<p>ANW, March 26, 2013:</p> <p>a) Please clarify whether there is any reflows to the GEF as a result of applying the non-grant instrument.</p> <p>b) Also please demonstrate that UNIDO has the capacity to manage the non-grant instrument.</p> <p>ANW, April 30, 2013:</p> <p>a) There will be no reflows to the GEF. Comment cleared.</p> <p>b) UNIDO has successfully implemented several renewable energy and energy efficiency projects involving non-grant instruments, particularly revolving funds. Comment cleared.</p>	<p>FJ - July 3, 2014:</p> <p>The project proposed does not include a non-grant instrument.</p>
Project Monitoring and Evaluation	21. Have the appropriate <b>Tracking Tools</b> been included with information for all relevant indicators, as applicable?		<p>FJ - July 3, 2014:</p> <p>Please revise the targets in the tracking tool once Q22 and the other comments have been addressed. Please consider revising in particular:</p> <p>a) The target of row 85.</p> <p>b) The target of row 86. In a context where operation and maintenance capacity seem to be key, the project is expected to support the design and implementation of a capacity building system operating that can be sustained beyond project completion.</p> <p>MY 8/20/2014: Cleared.</p>
	22. Does the proposal include a <b>budgeted M&amp;E Plan</b> that monitors and measures results with indicators and targets?		<p>FJ - July 3, 2014:</p> <p>Please revise the project results framework of Annex A once the other comments have been addressed. Please consider in particular revising the</p>

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			<p>following targets/indicators:  a) Outcome 1: the project is expected to support the adoption of policies supporting biogas development; the target should not limit itself to the proposal of regulations. The same comment applies to output 1.1 target.  b) Outcome 2: the number of biogas professionals trained is not sufficient as an indicator of the success of capacity building activities. Please define an indicator that would allow the project to monitor whether the trainees actually apply successfully what they have been trained for. Please also detail what is meant by "number of professionals certified".</p> <p>MY 8/20/2014: Cleared.</p>
<b>Agency Responses</b>	23. Has the Agency adequately responded to comments from:		
	<ul style="list-style-type: none"> <li>• STAP?</li> </ul>		FJ - July 3, 2014: n.a.
	<ul style="list-style-type: none"> <li>• Convention Secretariat?</li> </ul>		FJ - July 3, 2014: n.a.
	<ul style="list-style-type: none"> <li>• The Council?</li> </ul>		FJ - July 3, 2014: n.a.
<ul style="list-style-type: none"> <li>• Other GEF Agencies?</li> </ul>		FJ - July 3, 2014: n.a.	
<b>Secretariat Recommendation</b>			
<b>Recommendation at PIF Stage</b>	<b>24. Is PIF clearance/approval being recommended?</b>	ANW, March 26, 2013: Not at this time. Please address comments in boxes 5,6,7,12,13,17 and 19.  ANW, April 30, 2013: The PIF has been technically cleared.	

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		<p>However, the PIF will be processed for CEO approval only once the status of resources in the GEF Trust Fund is clarified.</p> <p>ANW, July 3, 2013: The PIF has been cleared.</p>	
	<p>25. Items to consider at CEO endorsement/approval.</p>	<p>ANW, April 30, 2013:</p> <ul style="list-style-type: none"> <li>a) Confirmation and detailed analysis of GHG emission reduction figures.</li> <li>b) Modalities for management and administration of the non-grant instrument.</li> <li>c) Concrete institutional arrangements to ensure that there are linkages between the proposed GEF project and the CTF-funded initiatives.</li> <li>d) Details on whether future calls for proposals are planned beyond 2014 by the government of Chile.</li> <li>e) Details on who will take care of the adjustments of the proposed model to other regions of Chile (adjustments for regional differences) and how this will be ensured.</li> <li>f) Clarification on the baseline use of the biomass and whether this baseline currently leads to anaerobic fermentation (and methane) or only aerobic fermentation (and therefore mainly CO<sub>2</sub>).</li> <li>g) Detailed information clarifying the respective roles of CORFO and CER in the management and funding of the non-grant instrument.</li> <li>h) A budgeted M&amp;E Plan that monitors and measures results with indicators and targets.</li> <li>i) Provide quantifiable SMART indicators for the logframe.</li> </ul>	

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Recommendation at CEO Endorsement/ Approval	<b>26. Is CEO endorsement/approval being recommended?</b>		<p>FJ - July 3, 2014: No. Important issues need to be clarified regarding the revised project, in particular regarding the expected incremental GHG emission reductions and the apparent redundancy with other existing initiatives. Please address the above comments and contact the GEF secretariat prior to re-submission.</p> <p>MY 8/20/2014: Yes. All comments have been cleared.</p>
	First review*	March 26, 2013	July 03, 2014
Review Date (s)	Additional review (as necessary)	April 30, 2013	August 20, 2014
	Additional review (as necessary)		

\* **This is the first time the Program Manager provides full comments for the project. Subsequent follow-up reviews should be recorded. For specific comments for each section, please insert a date after comments. Greyed areas in each section do not need comments.**